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ABSTRACT

Because human behavior is dynamic and influenced by multiple interacting variables, questions have emerged regarding the usefulness of a science that relies heavily on experimental methodologies. A review of current scientific practices in psychology illuminates how the cognitive authority of the field exonerates the standard view of science. This is widely represented in the literature through the use of experimental methodology, or more specifically, the randomized controlled trial. A discussion regarding the usefulness of non-experimental methodology in light of the current health care climate's emphasis on accountability ensues. Accountability concerns of efficacy and clinical utility will be addressed, especially as current scientific practices tend to keep in the margins valuable data. Valuable information remains uncovered: due to statistical insignificance, too many interacting variables for which to control, or because it is too subjective to be considered legitimate. Additionally, the data revealed is the data of interest to the authorities in the field and often is influenced by the current political climate. This is portrayed by the current emphasis on accountability, or providing evidence of efficient, and cost-effective practices. Contains 26 references. (JBJ)

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Expanding Scientific Practices to the Local Clinical Context

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Abstract

A review of current scientific practices in psychology illuminates how the cognitive authority of the field exonerates the standard view of science. This is widely represented in the literature through the use of experimental methodology, or more specifically, the randomized controlled trial. This is tauted as the "gold standard" (Seligman, 1995; Gray-Donald & Kramer, 1988) and therefore, receives the most attention and credibility from the dominant culture. A discussion regarding the usefulness of non-experimental methodology in light of the current health care climate's emphasis on accountability ensues. Accountability concerns of efficacy and clinical utility will be addressed, especially as current scientific practices tend to keep in the margins valuable data. Valuable information remains uncovered: due to statistical insignificance, too many interacting variables for which to control , or because it is too subjective to be considered legitimate. Additionally, the data revealed is the data of interest to the authorities in the field and often is influenced by the current political climate. This is portrayed by the current emphasis on accountability, or providing evidence of efficient, and cost-effective practices. It is suggested that by aligning oneself with the current political, and scientific agenda one is potentially subordinating data that may be of use and of interest to people of the local clinical context. Consequently, a vast array of valuable information remains unavailable. As the standard view of science continues to shape psychology, it is argued that counter efforts be made to expand acceptable scientific practices so as to address real life problems of diverse groups in natural settings.

INTRODUCTION

The current emphasis on accountability in mental health care is pressing the field of clinical psychology to provide evidence of the efficacy of specific psychological interventions. Psychologist's are cognizant of how research influences what treatments are funded but; more importantly, psychologists are sensitized to how this research is defining the parameters of the field. Consequently, a task force of the American Psychological Association (APA) has emerged to develop guidelines for clinical interventions (APA, 1995). This task force has two goals: 1) to consider the scientific evidence in which a particular intervention has been assessed, and 2) to consider the clinical utility, applicability, and generalizabilty to the local clinical setting (APA, 1995). It is timely for psychologists to recognize the precedent that has been set by empirically-driven, scientifically rigorous training programs that are immersed in the standard view of science.

At the inception of the research-practitioner model at the Boulder conference in 1949, the relationship between research and practice was encouraged. In fact, the conference approved a "broad definition of research to include a continuum of research methodologies from the most rigid hypothesis testing to the use of clinical and naturalistic devices for the formulation of communicable and testable generalizations" (Roe, Gustad, Moore, Ross, & Skodak, 1959, p. 88). However, many of the traditional training programs went on to be mostly dominated by experimental methodologies (Barlow, Hayes, & Nelson, 1984). Now more than ever, mental health care issues of accountability, such as efficacy and cost-containment, are demanding validation of the field. This, in turn, is defining the parameters of acceptable methods and practices in psychology. It is imperative that, at this time, psychology attend to the expansion of acceptable scientific practices and reconceptualize the use of science so as to address real life problems in real life clinical settings.

STANDARD VIEW OF SCIENCE

By giving primacy to the standard view of science and modeling behavioral sciences after physical sciences, psychology has de-emphasized concerns of applicability and generalizability to the local context. Concerns of efficacy have overshadowed local clinical utility. The rigorous scientific practice that tends to dominate Western psychology minimizes the value of alternative, naturalistic methods that provide a space for marginalized and diverse groups. Yet, psychology has gained greater authority and credibility by the scientific community and mainstream culture through adopting more rigorous methods (Cronbach, 1975).

The standard view of science presumes a singular view of reality, which in and of itself precludes sensitivity to diverse belief systems that may be employed in the local context. The standard view of science involves a positivistic notion of truth. It assumes a singular, universal truth that is knowable through observation. Observed reality is seen as objective and precludes subjective interpretation (Sampson, 1985). Therefore, knowledge attained through subjective methods is understood as less valid (Harding, 1991). Truth is revealed through the application of logic and quantitative analysis of the observed facts (Hare-Mustin & Maracek, 1990). It presumes a closed system with linear, cause and effect relations, rather than an open system that is dynamic and changes over time and across settings (Cronbach, 1975; Manicas & Secord, 1983: Hare-Mustin & Maracek, 1990). In Western societies science, through application of reason, has displaced church and state authority, "so that <u>scientific</u> has become a euphemism for <u>proper</u> (Hare-Mustin & Maracek; 1990, p. 28). Furthermore, with the medicalization of Western societies and the dramatic and seemingly magical cures of such mass killers as polio, diptheria, and tuberculosis, greater power and authority has been bestowed onto the medical institutions (Illich, 1976; Starr, 1949). These factors give greater authority to the scientist and promote the dismissal of other scientific and epistemological stances because of subjectivity and lack of rigor.

The implications of universally applying this mode of science are numerous. The most obvious is the marginalization of significant information. Significant information becomes suppressed through statistical application. Variables that are statistically insignificant get filtered out and are not seen as important. In the same way, by trying to narrow a hypotheses to a testable form the researcher tries to eliminate all other variables: thus, a wealth of information remains unavailable (Cronbach, 1975). Furthermore, prestige and authority is bestowed on the experimental, empirical investigator. Consequently, people who do not participate in the positivistic notion do not get recognized as authorities in the field. In essence, their research gets suppressed (Addelson, 1983). Finally, the political agenda of the times literally "buys into" the more prestigious sciences. And, in a capitalistic society funding is given to those sciences that are likely to solve problems of economic expansion (Addelson, 1983). Therefore, the scientist may not feel at liberty to pursue questions of curiosity when, indeed, the political climate has another agenda. Knowing high quality experimental designs often suppress large amounts of valuable information, it is timely that the field of psychology begins to accept and apply a broader range of scientific methodologies. Methodologies, such as the large scale survey and qualitative designs for example, provide additional information that can contribute to clinical utility in real life settings. Instead of ignoring methodological challenges in natural settings, we must rise to the occasion and find the best method for the problem (Kerlinger, 1986; Cronbach, 1975).

THE SIGNIFICANCE OF ACCOUNTABILITY AND MANAGED MENTAL HEALTH CARE

The emphasis on accountability that has been fueled by health care reform reinforces the broad based application of experimental designs. For health care providers to compete, they "must demonstrate competency in cost-effective therapy that is measurable through clinical outcome studies" (McFarland, 1995, p. 2). The benefit of this reform is that it is pressing the field of psychology to evaluate the effectiveness of it's

services The current paradigm, with the standard view of science in the forefront, addresses concerns of accountability through a broad based application of efficacy studies in controlled, clinical settings. However, these aggregate studies inadequately generalize to the local clinical context (Cronbach, 1975), jeopardizing the accountability of these practices in diverse settings. Additionally, the research often reflects more of what the scientific and political community value and perhaps less of what the local population values. Cost and efficiency, which are the values put forth in a capitalistic society, have led to unprecedented influence in the delivery of health care (Newman & Bricklin, 1991). Without adequate outcome studies, mental health care has little power to impact the decision making authority with the delivery of services.

More recently, emphasis on the consumers' expectations and desires (Pekarik, 1993) as well as the needs of the local clinical context, have come into consideration as a significant aspect of accountability (Trierweiler, 1992; Trierweiler & Stricker, 1992; APA, 1995; Seligman, 1995). The ethical definition of accountability means providing the highest standard of service available (APA, 1992). In addition to providing clinically-effective, cost-effective services, accountability involves being highly sensitive to the consumer(s) being served. It seems plausible that accountability means balancing rigorous quantitative inquiry with more local, qualitative methodologies that address generalizability and sensitivity to the local populations. In essence, accountability is balancing clinical efficacy with clinical utility (APA, 1995).

In light of the current emphasis on accountability, the following sections compare the benefits of traditional efficacy studies to the large scale survey, such as consumer reports survey, and more local, qualitative studies.

BENEFITS OF EFFICACY STUDIES

Traditional efficacy studies have considerable benefits. The most compelling advantage of the efficacy study is the strength of internal validity. The strength of the design is in the ability to assess whether treatment made a significant difference on the

outcome (Campbell, 1957). Yet, it is often at the expense of the external validity or generalizability to different populations and settings (Campbell, 1957; Cronbach, 1975). Of course, the ideal design would be strong in both internal and external validity (Campbell, 1975). The randomized, controlled trial is widely recognized as the "gold standard" for causality inference (Gray-Donald & Kramer, 1988, p. 885). Random assignment "offers the best chance for groups to be similar in all respects, except for the exposure or treatment under study" (Gray-Donald & Kramer, 1988, p. 885). The benefit of the traditional efficacy studies are that they are able to more closely assess the specific effects of a psychotherapeutic intervention than any other type of research. Through the use of comparison groups under well-controlled conditions, efficacy studies are better able to predict a cause and effect relationship between treatment and outcome (Seligman, 1995; Gray-Donald & Kramer, 1988).

Traditional efficacy studies have the benefit of being able to predict successful treatment under specific conditions; however, its limitation is in its ability to appropriately predict the effectiveness of the treatment in diverse, natural settings where numerous interacting variables remain unaccounted for by this design. According to Seligman (1995), traditional efficacy studies do not assess therapy as it is done in the field. Yet, one way to address the validity of research, as well as it's realism, might be to incorporate more "realistic" variables into the designs while still maintaining a high standard of empirical validity.

Efficacy studies assess manualized therapy of fixed duration, whereas in the field, psychotherapy is self-correcting, not manualized, and of variable duration. Seligman (1995) implies that neither of these can be accounted for in traditional efficacy studies. However, this writer disagrees. It does seem plausible that a traditional efficacy study could be designed with self-correcting therapy and variable duration as two independent variables. This would retain the strength of internal validity while enhancing the generalizability to the clinical setting. Additionally, Seligman (1995) states that efficacy

studies are aimed at studying one diagnosis with a focus on specific symptom relief; whereas psychotherapy, as it occurs in the field, attempts to improve general functioning as well as specific symptom relief. Again, it seems feasible that efficacy studies could include an assessment of global functioning in addition to symptom relief without jeopardizing the study. Furthermore, Seligman (1995) argues that psychotherapy in the field focuses on relieving interacting difficulties, as opposed to the treatment of the diagnosis; and, he suggests that it is truly difficult for these studies to mirror what actually happens in the field. Perhaps this highlights a weakness inherent in efficacy studies, for it does not assess the effect of multiple interacting variables on outcomes.

MOST COMPELLING IMPLICATIONS FOR A LARGE SCALE SURVEY ADDRESSING GENERAL FINDINGS

The timely and necessary objectives of Consumer Report's (CR) survey to assess "what happens in real life, where problems are diverse and less well-defined" ("Mental health: Does therapy help?",1995, p. 734) are important, especially if psychology is to successfully enhance its sensitivity to diverse groups in diverse settings. Seligman (1995) suggests that the large scale survey is much more adept at understanding the local utility of psychotherapy treatments. Seligman (1995) agrees that it is important to develop more realistic measures to assess what is happening in the field, such as methods that show evidence of efficacy of treatments in the clinical setting. He describes this large scale survey as an effectiveness study. "Effectiveness" studies are promoted by the APA Task Force on Psychological Intervention Guidelines (APA, 1995). Effectiveness studies are designed to determine the applicability, feasibility, and generalizability of an intervention of established efficacy in the local setting (APA, 1995). Seligman (1995) suggests with a few methodological changes the large scale survey is one method that adds some evidence of psychotherapeutic success. Seligman (1995) argues the greatest virtue of the CR study is its realism. Consequently, the statistical validity is likely to be significantly enhanced with the expansion of this design to more prospective and

diagnostically sophisticated surveys, combined with well-normed and detailed assessment used in efficacy studies, as well as detailed, behavioral information. Seligman (1995) argues that this design might hold the statistical stringency, empirical validity, and realism that the field is seeking (Seligman, 1995, p. 10).

However, it appears that Seligman (1995) overstated the validity of the C R's results. He states that the study provided "empirical validation of the effectiveness of psychotherapy" (Seligman, 1995, p. 10). Yet, the C R's study exhibited poor internal validity. This non-experimental design, by definition, employed no controls over time or independent variables. Furthermore, there was no ability to randomly assign subjects to groups, as might be the case in experimental designs. Random assignment serves as a way to systematically control for extraneous and confounding variables. Historical self-report and selection bias inhibited the ability to suggest internal validity, as does the fact that there was no control for maturation. This nonexperimental study is essentially the same as the one shot case study, which is thought by many to be "scientifically worthless" (Kerlinger, 1986, p. 295; Campbell & Stanely; 1963; Christensen, 1994).

According to Kerlinger (1986), one of the greatest weaknesses of nonexperimental design is the risk of improper interpretation. The C R survey applies the post hoc fallacy where "it is easy to assume that one thing causes another simply because it occurs before the other" (Kerlinger, 1986, p. 347). In this case, the assumption that psychotherapy was the cause of improvement ("Mental health: Does therapy help?", 1995; Seligman, 1995) is misleading. The C R's study is weak in internal validity. Equally overstated is the the attribution that peoples' improvement in general function as well as symptom relief is a result of psychotherapy.

Despite the methodological flaws and the overstated validity of the results, the aspirations to be more realistic and naturalistic are commendable. The most compelling implications of this survey are that if methodological changes are made that Seligman (1995) suggests and controls are put into place, the validity of this design is likely to be

greatly enhanced. Additionally, large scale surveys are exceptional tools for enhancing our understanding of the population. These scales are very appropriate tools to report descriptive data which would be useful in helping us to understand the diversity of populations, attitudes, and needs.

MOST COMPELLING IMPLICATIONS FOR THE LOCAL CLINICAL SCIENTIST

The most compelling implications for the local, clinical scientist's methods are the emphases on individual cases in real life situations. More specifically, the emphasis is on understanding the idiographic, the individual in the local clinical context (Trieweiler, 1992). The local clinical scientist's efforts contribute significantly to scientific knowledge which is central to accountability (Barlow, et al., 1984, p. 176). Local clinical science is sensitive to information that was previously marginalized or made invisible through statistical insiginficance or subordinated because of it's lack of scientific authority. The most compelling implication of local science is how, in combination with experimental designs, it can lead the way to attaining greater accountability for the local consumer. Additionally, the scientist-practitioner relationship that has been desired by both Boulder-Model programs and Professional Schools of Psychology can be realized. Local science does this by making research more accessible to the clinician, enhancing research consumerism, and breaking down the walls that contribute to the marginalization of clinically significant data.

First, a local understanding that pays careful attention to uncontrolled conditions, personal characteristics, and events that occurred during the treatment can greatly enhance the depth of understanding in which the treatment occurs (Cronbach, 1975, p. 125). "As results accumulate, a person who seeks understanding will do his[her] best to trace how the uncontrolled factors have caused local departures from the model effect. That is, generalization comes late and the exception is taken as seriously as the rule" (Cronbach, 1975, p. 125). This making visible what previously had been invisible brings to the forefront information that had been suppressed as a result of statistical

insignificance. Cronbach (1975) asserts that it is next to impossible to generalize from the laboratory setting to practice settings because of experimental science's inability to uncover and detect the infinite number of client-treatment interactions. Through the use of intensive local observation, statistically marginalized information is brought into view, detailed client-treatment interactions are highlighted, and further incongruencies from the laboratory to the local setting are discovered. This information is all very relevant to accountability.

Accountability is enhanced when there is an increase in sensitivity and justice toward the consumer. In an effort to protect against bias, local science can begin to open the dialogue between diverse groups and the scientist. The subjectivity of the scientist is addressed, rather than veiled in "objective" practices, and the stories of the subjugated, marginalized, and oppressed begin to unfold. Instead of forcing the culturally diverse to live in the margin, local science provides more of an opportunity for the untold stories, the distorted, the erased, and the dismissed histories of the 'Other' to be heard (Tamasese & Waldegrave, 1994; Fine, 1994). Local science involves more listening and less oppressing with expertise. It requires opening our eyes to the pain of diverse groups and rising to the challenge of integrating scientific methodologies that address the diversity of needs in clinical settings.

CONCLUSION

Human behavior is not necessarily best addressed solely through empirical, quantitative methodology, especially because so many variables remain suppressed. It leads one to question the utility of knowledge gained in this way. Knowing human behavior is dynamic and influenced by multiple interacting variables, it seems reasonable to question the usefulness of a science that relies heavily on experimental methodologies. At the same time, it seems important to maintain standards of high quality research and not to veil non-experimental designs in language implying empirical validity. Instead, it seems appropriate for the field of psychology to bridge the gap between the scientist-

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practitioner relationship by bringing "science, as a body of attitudes, skills, and strategies for inquiry into the realities of professional practice" (Trieweiler, 1992, p. 8).

Accountability concerns of cost-efficiency and efficacy are influential forces in defining the parameters of the field of psychology. The field needs to be aware of the influence of the dominant scientific paradigm and capitalism, and use it as an opportunity to expand beyond efficient and effective services to develop locally sensitive practices. It is important to understand what the consumer needs and wants. In this way, it is suggested that we not let the dominant political and social climate limit us from gathering scientific data that may further the social sensitivity of the field.

It is imperative that we understand the marginalized, our own biases, the effects of the dominant culture, statistically suppressed, and clinically significant data. We need to paint a picture of the natural setting and provide a space for voices to be heard. Instead of relying on a linear cause and effect model, this field needs to shift to an open system of information. Open systems, specific cases, limited samples provide in depth understanding of interacting variables and, therefore, greater accountability. When this information is fed into the open systems' loop, new theories emerge. The local clinical scientists' role of collecting data in the clinical setting is highly germane to uncovering biased, buried, and new data. It is suggested that by expanding and integrating quantitative scientific practices with qualitative practices, the relationship between the scientist and practitioner will be enhanced, as will the applicability of the research obtained.

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